



Phone 563.556.8392
Toll-free 800.678.6565
Fax 563.556.5321
4131 Westmark Drive
Dubuque, IA 52002-2627
www.eaglepoint.com

Eagle Point Solution to a Frequently Asked Question

How to Design a Vegetated Waterway using RoadCalc - Intro

Summary:

This document explains the process of developing a design profile with parabolic or trapezoidal shape to calculate volumes and create profile and cross-section sheets.

Product: Eagle Point Software™ 2004

Release: 2004 Q3 or 4.3.0 and greater

Platform: All

Related documents:

The tips, solutions and suggestions contained in Eagle Point Solution Papers, any Eagle Point Technical Assistance Document or given by an Eagle Point Technical Assistance Representative are suggested for use at your own risk. Document contents are subject to change without notice. No warranty of any kind, expressed or implied, is made with respect to such tips, solutions, and suggestions except as may be expressly stated in the licensing agreement or other contractual document, including, without limitation, any warranty of merchantability of fitness for a particular purpose. In no event is Eagle Point Software Corporation liable for incidental or consequential damages in connection with or arising out of the use of such tips, solutions and suggestions.

AutoCAD is a registered trademark of Autodesk, Inc. MicroStation is a registered trademark of Bentley Systems, Inc. All other product names are trademarks of their respective holders.

As always, should you have any questions regarding any phase of installation, contact Eagle Point Technical Assistance at (800) 477-0909.

Process

RoadCalc uses cross-section slices along with a design profile, alignment, and template to perform earthwork quantity calculations and to create CAD lines and views. The designer puts the original survey into a cross-section and profile format and then specifies a design profile and design template. RoadCalc will calculate cut and fill volumes and develop profile and cross-section construction drawings for plotting.

Three different options for Part I of the process are available, depending on the survey method used:

- Cross-Sections Using Level
- Total Station Topog
- Total Station Cross-Sections

Part II of the process is the same for all survey methods.

Completing the Process

Part I

1. Create an EP project.
2. Create a RoadCalc sub project.
3. Define the waterway centerline "alignment."
4. Process the survey data to obtain original ground Cross-Sections and Profile.

Part II

1. Create the Design Profiles.
2. Determine the shape and size of the waterway.
3. Create the Typical Sections of the WW design for each reach.
4. Run the design and review the cut/fill & volume results.
If necessary repeat steps 1 to 3.
5. Develop cross-section drawing sheets.
6. Develop the profile drawing sheet.

Submitted by Norman Friedrich.